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# A Room with a bath

Joel Urruty

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# ROCHESTER INSTITUTE OF TECHNOLOGY

A Thesis Submitted to the Faculty of  
The College of Fine and Applied Arts  
in Candidacy for the Degree of

MASTER OF FINE ARTS

*A Room With a Bath*

by

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November 20, 1997

College of Imaging Arts & Sciences  
School of American Crafts

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## INTRODUCTION

This thesis is a response to a personal problem I have with modern day bathrooms. The bathroom is a room we frequent daily, yet it is often times the room with the least visual interest. The design of a bathroom is no small task; it has many parameters that need to be addressed. One must consider the functional aspects as well as the practicality of the bathroom. Yet its aesthetics must not be overlooked. As a furniture designer and a craftsman I decided to challenge myself with the task of designing a bathroom. The goal was to create a unique setting for a bathroom, that evoked a positive emotional response from the user

The sterile environment often found in today's bathrooms is not welcoming. Most rooms in a home are decorated to express the inhabitant's personal style. When decorating a house, close attention is paid to rooms such as living rooms and dining rooms, yet the bathroom, which is frequented more often than either of these rooms, tends to have a generic look. In *The Essential Home Book, Getting Back To Basics*, Terence Conran states, "Until the move towards more hygienic surfaces at the turn of the century, people tended to furnish their bathrooms much like other rooms in the house, with bathroom fixtures treated like pieces of furniture, often encased in fine dark woods such as mahogany. With the drive against dirt, the bathroom became rather less hospitable, with hard tiled surfaces and free-standing white cast-iron bathtubs."<sup>1</sup> Through my extensive research I've come across several designers and architects who would tend to agree with my thoughts on this matter. They have attempted, as I have

with this thesis, to challenge the conventional concept of what a bathroom is suppose to look like. The designs I've come across through my research range from the exotic to the minimalist. It seems everybody has their own view on what the ideal bathroom should look like. My ideal bathroom would be one which I could spend time in, forgetting the everyday worries and pressures of the outside world. A place of contemplation and privacy, where one can collect one's thoughts before starting their day and recapitulate them at the end of the day. The visual statement I chose to communicate in my design is one of comfort, elegance and serenity.

Before delving into the design of this bathroom, it is important to take a look at the history of the bathroom and its role in human history. In view of the fact that what we consider a bathroom has only been in existence since the early 19th century. This will help us understand why the bathroom came to be what it is today.

# I

## HISTORY

Man has always had to deal with bathroom issues. It is thought that prehistoric man learned to relieve himself downstream keeping his living environment reasonably clean. When man moved away from the rivers and streams for better hunting or farming conditions he had to find other ways of dealing with his waste. Archeologists have uncovered what they believe to be the earliest attempt at an indoor latrine on the Orkney Islands near Scotland. This site dates back to the neolithic period 5000 years ago. The latrine consisted of a hollowed-out area with a crude drain dug into a stone wall. They suspect this hole enabled the occupants to relieve themselves without having to go outdoors.

We find early evidence of bathrooms in the Ancient World (2500–550 BC). Here tribes and groups built towns populated by hundreds of thousands of people. These towns are found in Mesopotamia, now Iraq, Egypt, Greece and the Indus Valley, now Pakistan. The Sumarian people, built a city called Babylon, a Mesopotamian city, with a population of 200,000. In this city remains of "Eastern-style toilets" were found in many of the wealthier people's homes. These toilets consisted of a hole in the floor above a cesspool which collected all the waste matter. Eastern toilets are still widely used today all around the world. Modern scientists believe that the squatting position used for this toilet is more natural and comfortable than our western-style toilets. The poor people of Babylon, which comprised the majority of the population, relieved themselves in chamber pots, which

were then thrown out into the streets. Needless to say the streets of Babylon were far from clean. The Babylonians remedied this situation by covering the filth with a layer of clay. When the streets were again filled with sewage they would put on more layers of clay. The streets of Babylon grew higher and higher, and the people of Babylon were forced to build new levels on to their homes or build passageways down to the entrances. In another Mesopotamian city called Mari, archeologists have uncovered bathtubs and western-style toilets. The toilets consisted of a seat placed above a cess pool. By the seat stood a jar of water to be poured down the latrine to wash away the waste.

Many great findings were uncovered in the ancient city of Tel el Amarna in Egypt. Sinks carved out of stone with metal faucets and lead drain plugs were found in tombs. A limestone seat with a hole in the center was thought to have been placed above a sandbox, similar to today's catlitter. Also found was a large slab of limestone surrounded by low walls covered in stone. Most likely used as a shower, the bather would stand on the slab while a servant poured water over their body. It is believed that keeping clean was an important part of the Egyptian lifestyle because it played an important role in their religion.

One of the earliest cities ever to be uncovered was Mohenjo-Daro, found along the Indus river. The city was very advanced, with brick lined sewers running beneath the city streets and drains inside homes to carry bathroom and kitchen waste to these sewers. The sewer system then carried the sewage into a main cesspool, which was emptied regularly by city employees. Both Eastern-style and Western-style toilets were present in Mohenjo-Daro. A large public bath was found by a temple, leading to the assumption that, as in Egypt, bathing was a part of religious ceremonies.

One of the innovations pioneered in Egypt and Babylon which helped pave the way for future innovations in bathrooms was the under ground aquaduct. These aquaducts were long channels which carried water collected in cistern to areas which did not get much rainfall.

The Romans were famous for their complex aquaduct systems. They had both underground and above ground aquaducts channeling 92 million gallons of water a day into Rome. Rome's generous supply of water enabled the city to build elaborate public baths where people came to relax, exercise and socialize. Public latrines were also built in the city of Rome. Stone seats with holes in the center were placed over a channel of running water allowing the waste to wash away. Placed by the seats was a bucket of salt water with a long stick with a sponge tied to the end. This tool was used as toilet paper. It is believed that the expression "grabbing the wrong end of the stick" originated in Rome. The wealthy had constant water running out of nozzles through their homes for use in cooking and cleaning. Although it was against the law to throw human waste onto the street this was common practice.

The Romans brought their advanced plumbing system to every land they conquered. The Roman Empire crumbled after several hundred years of peaceful reign. Tribes from north eastern and western Europe destroyed much of what was left of the magnificent public baths and aquaducts. With the destruction of the Roman Empire, sanitation and bathing ceased in Europe for the next 1000 years.

In Asia and Muslim countries bathing continued to be a part of life, but in Europe with the birth of early Christianity bathing was considered sinful. People lived in filth; dirtiness was a sign of holiness. In her book, *Toilets, Baths, Sinks and Sewers*, Penny Coleman Gives an example of an early christian who bragged of not washing herself for eighteen years after her baptism.

Until the late 18th century, bathing was only used for medicinal purposes. Religious belief taught that it brought about unhealthy sexual desires, which were prevalent in the Roman baths. The streets and rivers were filled with human waste, and as the cities got to be more populated, the conditions got even worse. It wasn't until 1832, when the Cholera epidemic arrived, that people in Europe realized living in such filthy conditions was unhealthy.

America developed with unsanitary habits, brought by the first settlers in the 1600s. Coleman also says that "A law was passed in Boston in 1845 that forbade taking a bath unless a doctor prescribed it."<sup>2</sup> American cities and towns were built without sewers or septic systems. It was common practice to dispose of one's waste onto the street. Soon the streets were filled with filth and sewage.

To give an idea of how bad the situation was, Coleman notes that in 1840 thousands of pigs roamed the filthy streets of New York City, and Cincinnati, Ohio. Cincinnati had so many pigs it was known as "Porkopolis." Disease flourished in these filthy conditions.

In the mid 1800's people started to change their hygiene habits. In 1899 a group of women came together to form *The Women's League for Sewage and Drainage* to remedy the problem of water supply and drainage in American homes. After World War I bathtubs, sinks and toilets were being produced in mass quantities and installed in houses, schools, factories, hospitals and hotels. Sanitary conditions were being improved, and people started to change their filthy habits. Now that clean water was easily accessible and polluted water piped away, disease was no longer the problem it once was.

The first bathrooms manufactured in America were adorned with painted motifs and ornamental detail. But these bathrooms soon gave way to the sleek modern look. In *The Bed and Bath Book*, Terence Conran talks about the extravagance of early bathrooms. "In upper-class bathrooms of the 1880s, which were usually converted bedrooms, the imposing hooded bath had a carved mahogany shower cabinet with hinged doors. The shower ran hot or cold, a strong jet or a fine spray."<sup>3</sup> These type of showers were soon replaced with less expensive models, thus becoming accessible to a greater market. The once highly-ornamented bathrooms reserved exclusively for the very wealthy were being stripped of their decorative frills and then mass-produced with cheaper materials for sale to the general public. The bathroom came to be a very functional room with easy-to-clean surfaces. By eliminating the welcoming qualities of hand made furnishings, such as decorative carvings and painting, the bathroom became a cold and sterile place.

In the past 20 years designers and architects have been looking at the bathroom as a potential space for personal expression. Today we find distinctive bathrooms which possess many different styles and motifs. A style can be representative of the owner's own personal tastes such as country cottage, colonial, oriental simplicity, Mediterranean, high tech., or any other style that best suits their needs and desires. What might be comfortable and pleasing to one person can be just the opposite to another. That is why today we find such a wide range in bathroom design.



## II

### ORNAMENT

Ornament is defined in the Webster's seventh collegiate dictionary as something that lends grace or beauty; a manner or quality that adorns. The art of decor and ornamentation has existed throughout the history of the architecture. The embellishment of a setting such as a bathroom can be referred to as architectural ornamentalism because it deals with an entire setting with built in components such as the shower, tub and sink. These elements although not structural, are vital and must be considered in the overall layout of the room. Architectural ornamentalism is not a new concept, it has been around since the beginning of civilization. Though the bathroom as we know it has only been around less than a century, architectural detailing has been ever present throughout the history of civilization.

Maybe the first sign of decor in a bathroom setting was found with the Romans. Roman baths were famous for their use of architectural ornamentation. Only the wealthy had any semblance of what we consider now a bathroom. Roman baths were highly decorated but they can not be considered bathrooms. They have more in common with our modern-day spas or health centers. Two of the greatest baths, those of the Emperors Caracalla and Diocetian, were decorated with beautiful marble, statues, bronze doors and mosaics. These baths were luxurious places where people congregated and spent hours exercising and pampering themselves. A lot of the architectural details used by the Romans are emulated today. From the 16th to the 18th century we find items used for cleansing and defecating but there still is no room designated for these items. During this

period royalty and the very wealthy had closet stools concealed chamber pots, usually found in the corner of a room, and often exuding a pungent stench. These closet stools were gilded and wrapped in velvet. Skilled cabinetmakers were hired to build furniture that concealed washbasins, bidets and chamber pots. These items were designed in the latest styles with embellished surfaces and extravagant ornamentation. They were generally found in bedrooms or living rooms, and had to blend in with the rest of the furniture.

Not until the 19th and 20th century was real progress made with the modernization of the bathroom. Inventors started to devise ways of piping running water into homes, improving drainage and also heating water. This led to great advances in indoor bathrooms. The industrial revolution brought many great advances to the bathroom. Inexpensive, durable materials, were being fabricated that were resistant to dirt and water stains. Bathrooms became more accessible and affordable to the public. The designs focused more on utility and neglected the aesthetic issues. It could very possibly have been the intent of the designers, for at that time Modernism was in full swing, the Modernist designers looked down on any type of ornamentation. It concealed what they revered most: structure. It was believed that by disguising structure and material with decorative detail one was hiding the necessity for perfection. This would explain why so many bathrooms and fixtures lack any type of ornamentation. This philosophy resulted in stale, cold environments which had few, if any, welcoming qualities.

This thesis is a reaction to Modernist bathrooms which are still being produced today. Though highly functional and hygienic they lack the charm and sensitivity of other spaces in the home. The fact that a whole room is being designed for this thesis means that the interior design is of great importance. Stanley Abercrombie, author of the book *A Philosophy of Interior Design*, stresses the importance of the designer's objective for a space when he notes that "An interior design must be guided by a certain goal- a clear vision of what is to be expressed- if it is to speak to its users without ambiguity or muddle"<sup>4</sup> The vision I had for my bathroom was one of a luxurious, warm atmosphere

with a handcrafted quality. My goal was to create a unique environment which was at once welcoming, elegant, contemporary, and timeless.

When I set out to design my bathroom there wasn't a clear design but rather a desired emotional effect I was striving to evoke from the user. A place where one can escape the stresses and pressures of the everyday world, like the Japanese and Koreans who sought spiritual peace and purity by bathing in remote mountain springs, I wanted this bathroom to serve as a quiet retreat for daily cleansing habits. Throughout history, cleanliness and the act of cleansing one's body has been linked to religious and spiritual healing, as well as energizing the mind and soul. In designing the bathroom I wasn't trying to create a holy space, but rather a peaceful setting with a meditative quality.

As a craftsman I believe I had something more to offer than the otherwise mass produced manufactured fixtures commonly found in bathrooms. As Pat Conway mentions in the preface of her book *Art for Everyday*, "Well-designed spaces take on a warmth and personality that even the best commercial finishes and furnishings seldom achieve. Large building projects provide opportunities for craft artists to work at a monumental scale and they, in turn, bring to these projects a special liveliness- a sense of animation and the presence of human spirit."<sup>5</sup> The handmade object has much more to offer than an item which came off an assembly line, it has the quality of the human touch.

Although today's manufactured bathrooms come in a variety of styles and colors, they do not express the thoughts, feelings and beliefs of the maker, or arouse an intellectual, emotional, and spiritual response in the user. The Arts and Crafts movement believed that the craftsman possessed a reverence for the material and process of his craft and that this appreciation is translated into the work. The work conveys the sensitivity and commitment of the maker. The quality that the craftsman brings to a project can not be found or reproduced in the impersonal, anonymous and mechanized mid 20th century American modernistic products.

### III DESIGN

The method used in designing this bathroom was not the typical process used to design a room. The pieces which comprise the bathroom were not all designed prior to construction, rather the design of one piece lead to the design of the next. Each piece in this progression derived maximum benefit from my continuing research and evaluation of the preceding piece.

My first step was to decide which fixtures to have in my bathroom. I made a list of different fixtures normally found in a bathroom, and then evaluated each one by using three criteria (Table 1). The three criteria by which I rated each project were 1., the necessity of the piece in a bathroom, 2., the feasibility of my completing the piece within the time allotted for my thesis, and 3., the interest I had in building the piece. Since there are many different types of bathrooms, this list allowed me to focus my attention on what I thought would best represent a complete setting for a bathroom. The items that ranked highest on my list were sink, mirror, shower, toilet, medicine cabinet and hamper. I included the hamper not out of necessity, but because it seemed like a good starting point. When I began designing the various fixtures I found that my designs were eclectic, I had a difficult time narrowing my focus on a cohesive aesthetic for my bathroom. I knew what type of atmosphere I wanted to create, but I had a difficult time generating a unified relationship among the separate fixtures. I decided to leave the design process and start constructing my first piece. I picked the design I felt was the most developed and began building.

Table 1. Project evaluation

Fixture	Feasible	necessary	interest	Total
Medicine Cabinet	x	x	x	3
Vanity	x		x	2
Screen	x		x	2
Dressing stool	x		x	2
Toilet	x	x		2
Bathtub			x	1
Light Fixtures	x		x	2
Towel Rack	x			1
Trash Can	x			1
Mirror	x	x	x	3
Sink	x	x	x	3
Hamper	x		x	2
Shower	x	x	x	3

I consider my first piece, the hamper, to be the beginning of the aesthetic direction I wanted the bathroom to take. By examining and evaluating the hamper, I was able to

find what it was about the hamper that I originally found so appealing. I introduced these elements into the design of the other fixtures. Unity prevails when a harmonious interrelationship of design elements is present within all the fixtures in the setting. Line, shape, texture and color are the four basic elements in the design language I worked with to attain the desired results.

## AESTHETIC CONSIDERATIONS

### LINE

Wood, as a material, can be used in many fashions. A constructivist style can be achieved with the use of hard angles and planes, or a more animated style can be arrived at by introducing soft curves and fluid lines. I decided that the welcoming atmosphere I wished to convey in the bathroom could best be brought about with the use of fluid line. Wood as a material is receptive to this type of treatment, being easily shaped and carved.

Curved lines can sometimes express a gentle and quiet statement. When curves have a direct relationship with gravity they take on an active role. This fact is present in the design of the hamper and sink. The hamper and sink have four rib like members that are connected at the base and blossom upward like a tulip. The use of line in these pieces suggest growth and can be associated with the lines found in certain plants and flowers. The consistent use of this detail generates a sense of unity in the pieces and their surroundings.

Arcs are another type of curved line I used in my design. The arc's soft inviting quality helped evoke the mood I wanted. The arc has the quality of formal balance due to symmetry. Symmetry plays a strong role in the design of every piece in the bathroom. The vertical axis is the central fulcrum which divides the piece into two equal counter parts. The repetition of the mirror image found on each side of the central axis

distributes the visual weight of the elements in a perfect balance. This perfect physical and visual balance known as symmetry is a formal balance. The equilibrium found in formal balance gives us a feeling of stability and serenity. The straight lines in the design of the bathroom were placed in a vertical direction to add a dynamic property. Robert C. Wilson, author of *An Alphabet of Visual Experience* writes that the vertical line "expresses qualities of spiritual uplift, emotional ecstasy, poise, balance, honesty, and dignity."<sup>7</sup> The fact that the vertical lines employed in the designs are tall and slender enhances their spiritual uplift and dignity.

## SHAPE

Robert C. Wilson defines shape as an "element of design having a two dimensional quality and representing a mass."<sup>8</sup> He then goes on to explain that form can be considered a shape with a three dimensional quality. Since the bathroom is three dimensional I will talk about form when referring to the shapes of the various pieces in the bathroom. There are several similar forms repeated in the design of the pieces. Certain shapes produce certain emotional responses. These responses can coerce the viewer into feeling a certain way. It was my goal to manipulate these elements in the design to achieve the intended emotional response of the audience. A cupped shape, like that of a smiling mouth, tends to evoke a positive and cheerful reaction. This shape is recurrent in the design of the bathroom. The form can be found in the copper basin, the pedestal supporting the basin, the bottom of the medicine cabinet, the hamper's wooden ribs, the sack hanging from the ribs and the negative space perched above the mirror. The shape can be perceived in the arc found at the foot of the shower.

Shapes that turn downward lead the eye down and bring forth a feeling of melancholy. This shape is also present among the various pieces in the bathroom. In

certain fixtures, such as the medicine cabinet, shower and mirror, the cupped shape is reflected in a mirror image on the top and bottom of the piece. The mirror effect achieved with the combination of these two shapes creates a balance and a sense of enclosure within the piece. The eye is coerced into focusing on the piece as a unit. The eye is lead up and down without ever straying away from the piece.

In *The Essential Home Book* Terence Conran notes that "A room without a focal point is a strangely disconcerting one. There may be warmth, light and a comfortable place to sit, but without a feature to which all eyes instinctively turn in moments of repose it will never be a room which people feel really at ease."<sup>9</sup>. I consider the sink to be the focal point of my bathroom because it embodies so much visual information. The vertical shapes lead your eye upward to the heavens above. This is especially true of the wall unit behind the sink. The eye follows the two long slats and ends in a final arc shape facing the sky. The copper basin draws alot of attention with its simplicity and natural beauty

One of the distinctive characteristics present in the bathroom is the hand-crafted details found in every one of the pieces. The rib-like members of the hamper and the sink's pedestal were shaped by hand to produce graceful fluid forms. The shaping, done with a spoke shave, add a welcoming aspect that is difficult to acquire with hard lines. A slight subtle curve was introduced to the edge of all the pieces. This minor detail has many positive effects in the way we interact with the pieces. It welcomes the touch and softens the visual lines of the structures, making the overall atmosphere more approachable and comforting. This detail also relates to the arcs and curves present throughout the bathroom. The presence of the human touch is also apparent in the shaping of the rib-like prongs of the hamper and sink pedestal, the hand gouged texture found in all the pieces and the hammer marks of the copper. I attempted to treat every detail with regard to the material and the effect it would have on the bathroom as a whole.



## COLOR

In order to successfully control the mood in my bathroom I had to take into consideration the color scheme. Color, is an element which can evoke many sensations, mainly warmth or coolness. My goal was to create a warm, welcoming atmosphere. Reds, oranges and yellows reign as warm colors due to their association with fire. I introduced these colors into my bathroom by manipulating the materials.

To acquire the dark reddish brown hue in the mahogany I treated the wood a chemical called potassium dichromate. Potassium dichromate (potassium bichromate) is a mordant chemical which comes in a bright orange crystalline form. Mordants can alter the color of fibers by chemically reacting with certain substances found in the wood. This extremely poisonous chemical is diluted with water and applied to mahogany to darken the natural color. The hue can be modified by mixing a higher or lower concentration of mordant. Mordants produce very natural and clear colors because, unlike dyes and stains, there are no pigments introduced in to the finish.

A heat patina technique described in Tim Mc Creight's, *The Complete Metalsmith*, enabled me to get the warm reds and oranges I desired in the copper. " Along with its malleability and low cost, one of the features that makes copper so popular is its ability to turn beautiful colors. Chemicals in the air and earth will achieve these given time, but most metalsmiths prefer to control the process themselves. Be warned that the metal will take an active role in the process, often behaving in ways that defy explanation. Those who undertake patinas in the spirit of adventure are more likely to enjoy the process than those who want to dictate every nuance of the color."<sup>10</sup> The process was one of trial and error. I would take the copper pieces and introduce them to high levels of heat until they glowed to a bright red color, then I quickly quench them into a container of cold water. The result was an instantaneous, durable patina. If I was unsatisfied with the color or pattern of the patina I would repeat the process until I got something I was happy with.

. Once the metal had been exposed to such a high degree of heat it returned to its annealed state, making it soft and malleable, which meant I had to work harden it to restore its rigidity and shape. This was done by delicately hammering the metal back to its work hardened state. The unpredictability of the heat process produced colors and patterns that added a certain charm to the pieces. The charm being a sense of primitiveness and spontaneity, like the dotted deep purples found on the inside of the medicine cabinet. These were one of those hidden surprises which occasionally occur with this process of heat patinaing.

The colors found in the copper and the dark reddish brown of the mahogany compliment each other. They create a warm and elegant atmosphere with their rich deep hues.

## TEXTURE

Texture is present in many forms in the bathroom, and is used to add interest to the pieces. It expresses a visual statement as well as a tactile one. Some surfaces were sanded and polished to a smooth glass finish, while others were carved or beaten to reveal a rougher finish. The main reason I chose to introduce the two very different textures in my design was to create an element of contrast within each piece. The visual and tactile contrast realized with texture is subtle yet effective. The carved texture is particularly effective in bringing out certain elements within each piece. Frank Lloyd Wright, wrote in *An Autobiography* of 1932 that "expressive changes of surface, emphasis of line, especially textures of materials or imaginative pattern may go to make facts more eloquent-form more significant."<sup>11</sup> The texture present in both the mahogany and the copper introduces a dialogue between the two materials. The textures carved into the wood and hammered into the copper reveal a primitive quality found in both materials. This texture not only

creates a relationship between the two materials but also initiates an interesting dichotomy with the polished wood surfaces.

Both the materials, wood and metal, have an inherent beauty. The bathroom was specifically designed with subtle details to allow the inherent decorative qualities of these materials to be evident. Design details were approached with caution. Ornamentation has to be suitable to the material, it was used sparingly in order not to cover up the structure and natural beauty of the material. An excess of ornamentation can hide the inherent qualities of the materials and leave the user confused and unsettled.

## DESIGN:TECHNICAL

When designing fixtures for a bathroom one must pay close attention to the activity that one performs with these fixtures, thus the study and examination of the physical posture used when performing these tasks must be taken into consideration. The habitual hygienic tasks performed in bathrooms were studied in Alexander Kira's book, *The Bathroom*. The study of human proportion and ergonomics lead to new findings in appropriate dimensions for bathroom fixtures. The dimensions used for the design of this thesis were taken from Alexander Kira's findings and Terence Conran's recommendations.

### SINK (TABLE 1)

The sink is used daily for different tasks. The most common being hand and face washing. These two activities have distinctive ergonomic factors to be considered. Ideal dimensions found for a hand washing sink are different from those of a face washing sink. Since it is impractical to have a special sink for hand washing and another for face

washing, the two recommended dimensions were used to find a happy medium. These new dimension would allow the user to both wash their face and hands comfortably.

Lever handles were fashioned from those commonly found in hospitals. They are elongated making them easy to operate. Forged out of solid copper this type of handle is referred to as spread fit control. The cold and hot water are separately controlled and the faucet is placed in the center to retain the balance of the overall bathroom. The faucet was copper leafed to match the rest of the decor.

<b>Sink Dimensions:</b>	basin height: -36"
	depth of basin:-6"
	water source height:-42"

#### MEDICINE CABINET (TABLE 2 and 3)

Many people use the medicine cabinet to store a myriad of products and often end up having this space cluttered with unnecessary items. This particular medicine cabinet was designed to hold just a few of the necessary items commonly found in a bathroom. The dimensions for the cabinet were determined by measuring items I deemed as necessary

in a medicine cabinet. The list of various items to be stored in this cabinet are as followed: peroxide, band-aids, aspirin, rubbing alcohol, lotions, deodorant and toothpaste. The largest of these items was the peroxide container measuring 7" in height and 2½" in diameter and the smallest was the aspirin container measuring 3½" in height. The interior of the cabinet is divided into four levels, the largest having a clearance of 11" and the smallest 4½" The depth of the cabinet, 7½", is ample enough to allow for items to be shelved one in front of the other. The width measure 8" at the front of the cabinet and tapers to 6" at the back of the cabinet. The overall height is 32".

#### HAMPER (TABLE 4)

The hamper is designed to be filled with dirty clothing which can easily be transported by the user. A natural cotton canvas sash is cradled within a wooden case. When the sash is filled it can be unhooked and easily carried away leaving the wooden support behind. Cotton canvas was the material chosen for the sash for two reasons: The natural color blends well with the rest of the setting and the sash itself can easily be cleaned by simply tossing it in the washer with the rest of the cloths. The hamper was designed not to be so large that it would be obtrusive or too heavy to handle when it was full and ready to be emptied, yet not so small that it would not be able to accommodate an average load of laundry.

**Hamper Dimensions:** 32"x24"x24"

#### TOILET (TABLE 5)

Although it has been proven in Alexander Kira's medical and design research that squatting is the best position for defecating, the Eastern style toilet is simply not accepted by the western public. One of the solutions recommended by Kira is to lower the western toilet from a standard 16" to 12". This would enable the user to assume a more comfortable and natural position. There are several problems which arise by lowering the toilet. The elderly and disabled have a difficult time using the facility and the tendency of men to splash urine when urinating from an upright position. Because of these reasons and the various codes and standards required for water conservation I did not redesign the basic structure of the toilet. The way I chose to go about introducing a toilet in the design of the bathroom was to take an existing toilet and mask it with appropriate ornamental details that would suit the overall mood of the bathroom. I found a company in California called the Sunshine Co. that manufactures high boy toilets. The high boy toilet was chosen because its design possesses long vertical lines which went well with the rest of the bathroom. The original tank, which hangs on the wall is concealed within a decorative wooden carcass. The brass pipes found between the tank and bowl are incased within patinaed copper pipes. The seat was copper leafed and then patinaed to match the rest of the copper in the bathroom. Originally I had planned to reglaze the toilet bowl to acquire an individualized color, but my attempts at glazing a durable finish were unsuccessful. The vitreous china used for toilets now comes in a variety of colors and shades and is strong, durable, and resistant to acids and stains. I now realize that I was foolish to tamper with this part of the toilet, for whatever I would have done would have lessened these qualities.

<b>Toilet Dimension (standard):</b>	16"x14"x26"
	1.6 gallon
	tank: 7'

## SHOWER (TABLE 6)

The shower was placed in the corner of the bathroom. This allowed me to introduce arcs with the shower as well as use a corner space to its full advantage. The wooden slats and arcs in the shower have been finished with a marine epoxy used on boats. Three coats of west system epoxy were applied, sealing all the wooden parts. For the purpose of displaying the shower in the graduate show, sheet rocked walls painted a charcoal grey were used. Ideally these walls would be waterproofed with tiles, the same treatment would be applied to the floor and ceiling. The fixtures used in the shower were made by Kholer. I modified the fixtures by copper leafing them and replacing the plastic handle with one made of mahogany. After receiving a few comments from tall people about the inconveniences of low shower heads I decided to place mine high enough to suit tall people yet still kept it low enough so it can be reached by a person of average height. The shower curtain rings are made of solid copper.

**Shower Dimensions:** 8'x 4'x4'

## CONCLUSION

Advances made in plumbing and sanitation have made the modern day bathroom possible. The bathroom is a room where we can spend time cleaning and pampering ourselves. In order to make this room more hospitable, architects, interior designers and craftspeople have taken the bathroom to new limits. In this thesis I have learned that the concept of a bathroom is open to interpretation. There are no set rules one must follow, everybody has different needs and expectations. One person might find practicality high on his list of priorities, while another will have luxury. As innovations in bathroom fixtures progress it is up to the architects, interior designers and craftspeople to use these new products to help in the evolution of bathroom design.

The thesis topic forced me to look at all aspects of design: architectural details, practicality of materials and efficiency of design. The materials and the details used were designed to create an elegant and sophisticated ambiance in the room.

The undertaking of this thesis placed me in the role of designer, builder and engineer; quite a heavy load for a cocky young fellow like myself. I don't mean to say that I bit off more than I could chew, but my mouth was definitely full and on occasions I had a hard time swallowing. The thesis was definitely challenging. If I were asked to do it all over again I don't think I would and if I had to than I would go about it in a different way. First of all I would take advantage of the wide range of toilets, sinks and showers available on the market today and use those that would best work with the design scheme of the bathroom. Trying to design and build such items is like reinventing the wheel. I've learned that I can be a more efficient designer/craftsperson if I allow myself to make use of the services that are readily available to me. The plumbing aspect of the bathroom was by far the most difficult obstacle in this thesis. I began this thesis with a



basic knowledge of plumbing, thinking that I could work my way around the plumbing issues as they arose. In reality, I found out that plumbing is much more complex than I had originally thought. There are endless amounts of valves, fixtures, washers, adapters, rings and other gadget that made my life miserable. In the end I never was able to find a valve that would work with the handles I had forged out of copper. I'm not saying that it cannot be done, but there is just so much one person can do in a given period of time. In short, I had a tendency to complicate things for myself.

I found the actual wood working part of the thesis to be quite enjoyable, and am happy with the end results. The integration of wood and metal worked well and was quite effective. Overall I am happy with the thesis I can now look back on it and see my strengths and limitations. During the summer when thinking of a possible thesis project I realized I wanted one that was challenging, interesting and unusual. One that I would never forget. This thesis was all of the above and I know that I will never forget that bathroom I built as a graduate student at R.I.T.

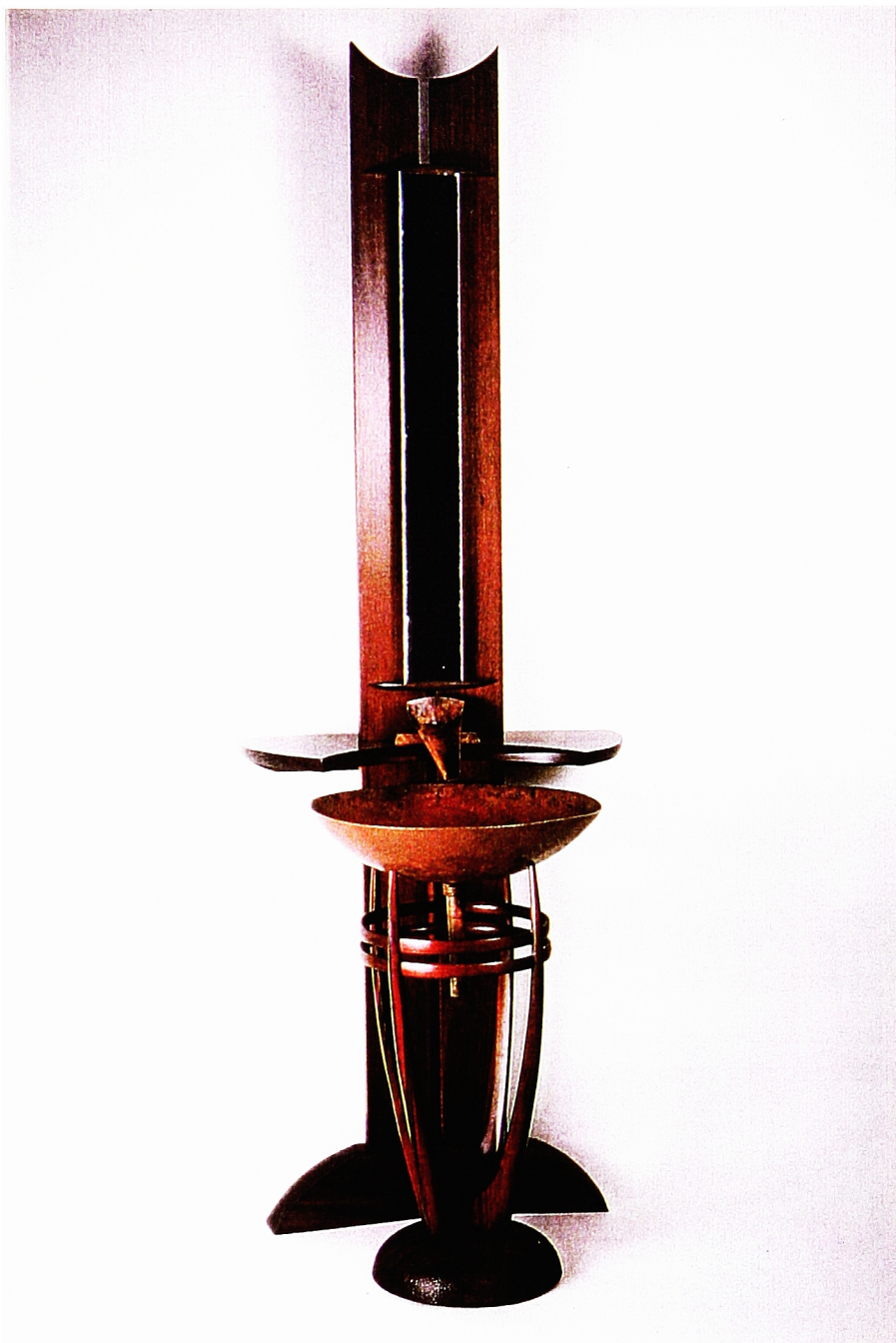


Plate 1

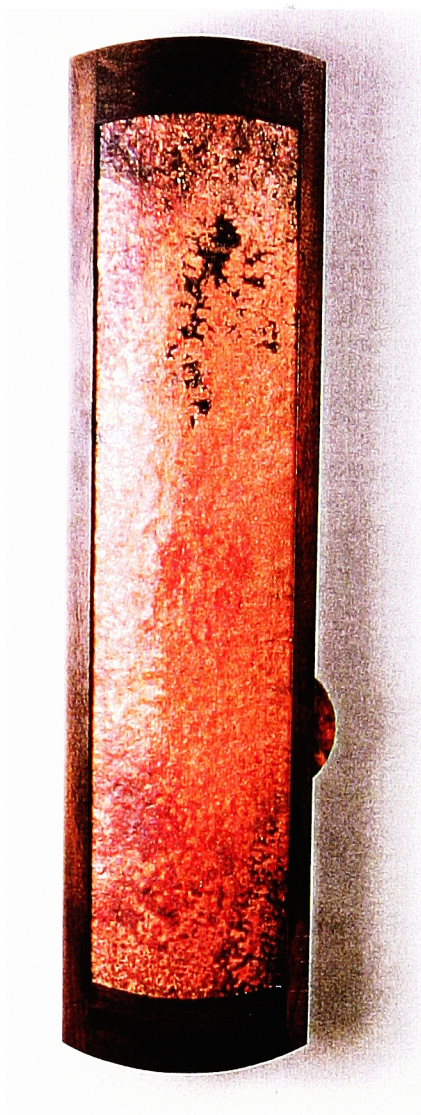


Plate 2



Plate 3



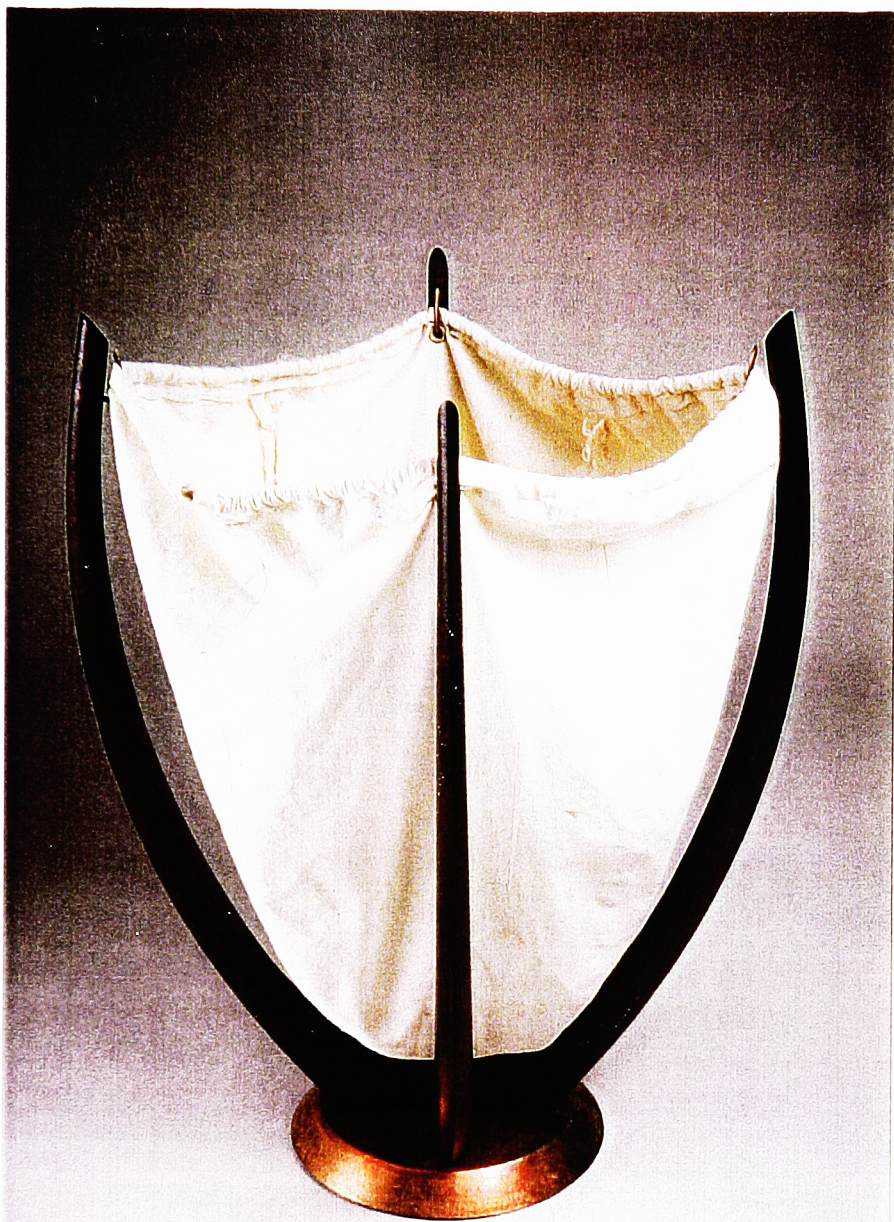


Plate 4

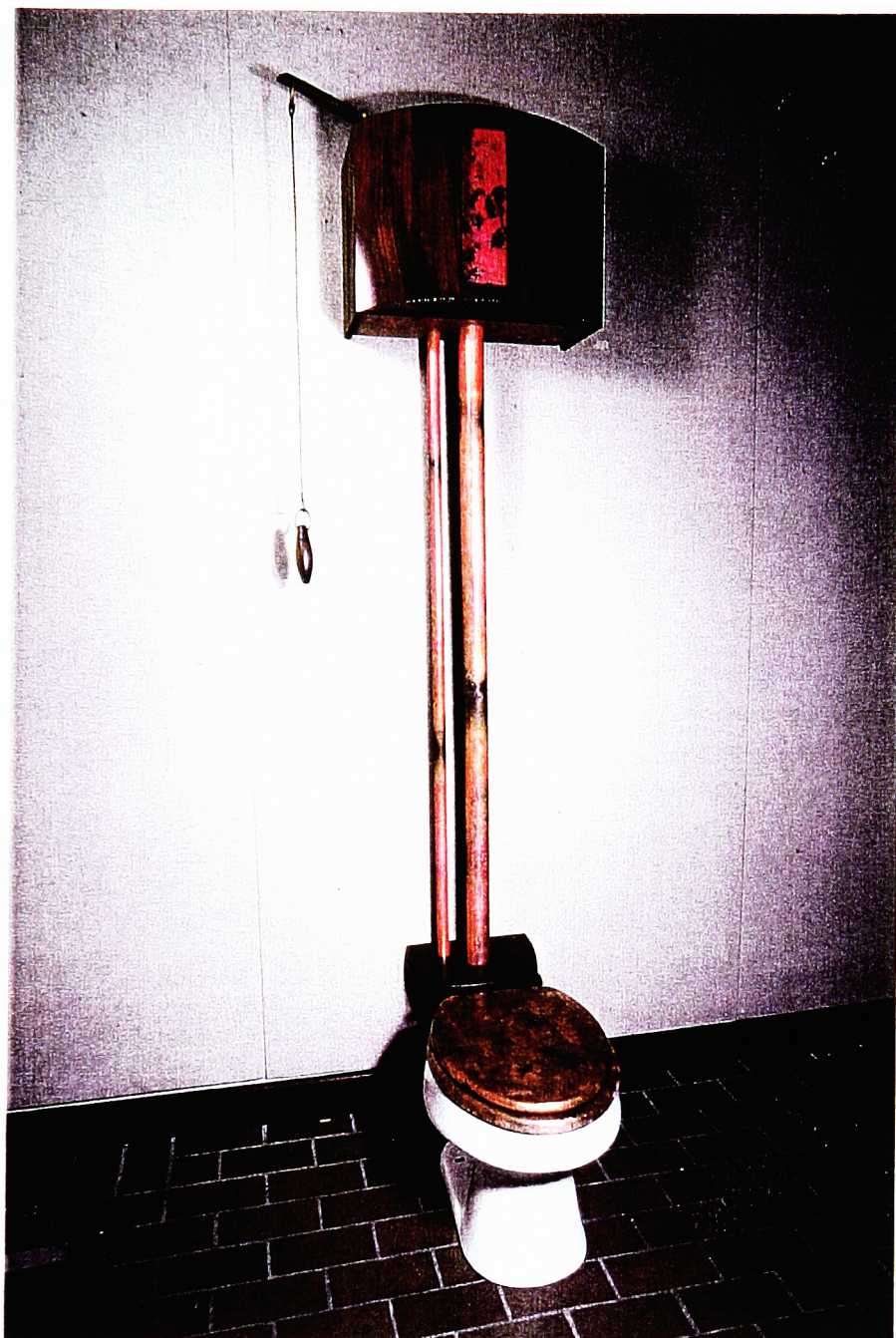


Plate 5



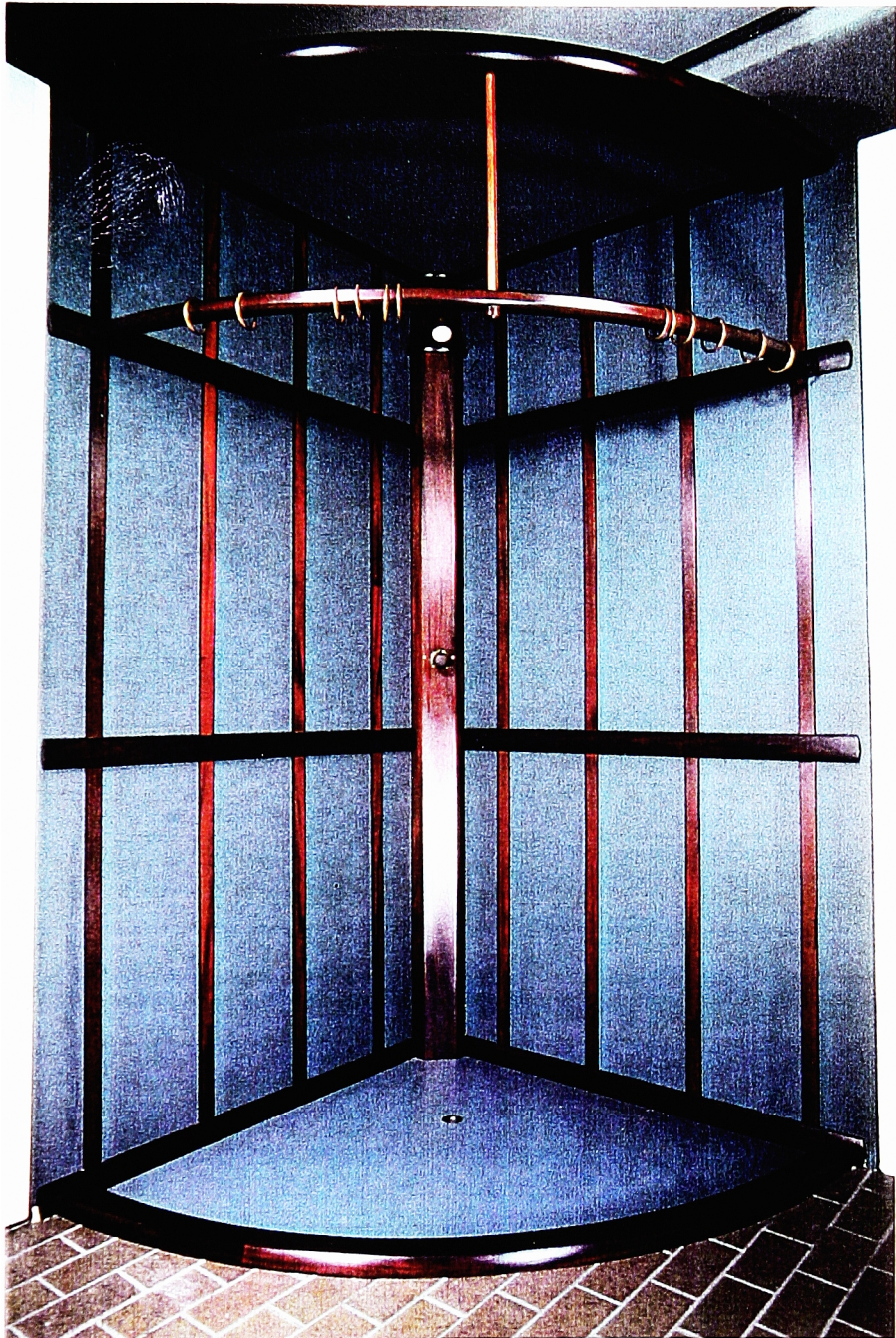


Plate 6

## ENDNOTES

<sup>1</sup> Terence Conran, *The Essential House Book*, (New York: Crown Publishers, 1994), p. 172.

<sup>2</sup> Penny Coleman, *Toilets, Bathtubs, Sinks, and Sewers*, (New York: Atheneum Macmillan Co., 1994), p. 49.

<sup>3</sup> Terence Conran, *The Bed and Bath Book*, (New York: Crown Publishers, 1978), p. 205.

<sup>4</sup> Stanley Abercrombie, *A Philosophy of Interior Design*, (New York: Harper & Row, 1990), p. 149.

<sup>5</sup> Patricia Conway, *Art for Everyday*, (New York: Clarkson Potter, 1990),

<sup>7</sup> Robert C. Wilson, *An Alphabet of Visual Experience*, (Scranton: International textbook Co., 1966), p. 153.

<sup>8</sup> Robert C. Wilson, p. 45

<sup>9</sup> Terence Conran, *The Essential House Book*, p. 156.

<sup>10</sup> Tim Mc Creight, *The Complete Metalsmith*, (Worcester: Davis Publications, Inc.) p. 35

<sup>11</sup> Frank LLoyd Wright, *An Autobiography*.(New York: Farrar Straus & Giroux, 1984)



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